

Remarks

Claims 19 and 20 stand rejected under 35 USC 101 as being directed to non-statutory subject matter with reference to recitation of a computer program. In response thereto, appropriate amendments to claims 19 and 20 have been taken. Review and acceptance is requested.

Claims 23, 24, 25 and 27 stand rejected under 35 USC 112 first paragraph as failing to comply with the enabling requirement. In response thereto, those claims have been cancelled.

Claims 1 through 27 stand rejected under 35 USC 103(a) as being unpatentable over Fellman et. al. '702 in view of Woods et. al. '451. The Applicant respectfully disagrees with the rejections of independent claims 1, 21 and 26 for the following reasons.

To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination and a reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. *In re Vaeek*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006) (discussing rationale underlying the motivation-suggestion-teaching requirement as a guard against using hindsight in an obviousness analysis). The teaching, suggestion, or motivation must be found either explicitly or implicitly in

the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir.2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

In the case at hand, the Applicant respectfully submits that these requirements for combining the cited references are not met for the following reasons.

Woods discloses a plurality of communication nodes which can communicate in order to execute logic in a coordinated manner. The communication passes via a circuit switched message carrier (cf. column 35 line 17). Each of the communication nodes receives a common clock signal from a master scheduler (ref. nr. 106 in the drawings, see column 7 lines 29-34). The common clock signal provides each member node with the same understanding of time (column 12 lines 9-11).

The master scheduler also sends a local event table 114, 116 to each of the nodes, which is used to control timing of time dependent events in the respective node and from which a respective task execution list is derived by the respective node. The master scheduler thereby informs the nodes at what point in time tasks have to be performed by the respective node (column 7 lines 49-53, column 8 lines 2-3). The node then generates a communications request list, which is send to the master scheduler, based on the tasks required from the node. The master scheduler generates a communication schedule based on the received request lists. The communication schedule is then split into parts applicable to each of the nodes and sent to the nodes by the master. The master scheduler thereby informs the nodes at what point in time which information has to be sent (column 7 lines 56-58). In consequence thereof, only the point in time at which the nodes have to transmit predetermined pieces of information is set. Woods does not disclose forbidding the nodes from transmitting data at other points in time. Therefore, Woods does not disclose that time-slots are **not** assigned to the nodes. Accordingly, Woods fails to disclose a "communication cycle comprising a number of time slots assigned to one or more of the nodes" as recited in the independent claims.

Furthermore, Woods only discloses that the transmission of information is initiated by a lapse of time and not by an event. Accordingly, Woods fails to disclose a communication cycle initiated by an event as recited in the independent claims. Accordingly, the combination of Fellman and Woods cannot result in a method with the features of the independent claims and those claims are consequently non-obvious.

Moreover, it is not obvious to a person with ordinary skill in the art to combine the teachings of Fellman and Woods, since Fellman concerns a network which supports real time and non-real time traffic, whereas Woods discloses a distributed computing system. This imposes different, incompatible requirements which make the Fellman-Woods combination counter intuitive. For example, in a distributed computing system, the part of the computing performed by a component of the system requires data from other components. Hence, the processes performed by the different components interact with each other and the tasks executed by different components must therefore be time synchronized to each other. On the other hand, for real time and non-real time traffic, there is no need to time synchronize the processing performed by the different nodes in the network relative to each other because the nodes operate independently. For this reason alone, the subject matter of Fellman is not compatible with the disclosure of Woods and a person with ordinary skill in the art would consequently not combine their teachings.

Moreover, Woods discloses a circuit switched network. Data therefore has a fixed delay and will arrive at a predictable point in time. On the other hand, Fellman discloses a packet switched network, which has a variable delay and which is therefore a type of network that is completely opposite to that of Woods. A variable delay, and therefore a packet switched network, cannot be used in the distributed computing system disclosed in Woods, because the data transmitted by a component has to

arrive at the point in time at which another component is scheduled to perform the tasks which uses this data. Accordingly, the network disclosed in Fellman is fundamentally incompatible with the system disclosed in Woods.

In fact, Fellman argues that precise scheduling is disadvantages and states that less precise synchronization is advantageous (see column 4 lines 37-40 as well as column 6 lines 45-47). Fellman therefore teaches away from Woods and thereby discourages a person with ordinary skill in the art from combining their teachings.

With regard to claims 2 and 3, it is observed that since Woods does not disclose "a communication cycle initiated by an event", a person with ordinary skill in the art could not combine the teachings of Fellman and Wood to arrive at the subject matter of those claims.

With respect to claim 4, it is observed that Fellman discloses a network in which different nodes are each assigned a time phase in a frame of time, during which time phase the respective node is allowed to transmit. In order to obtain a common time reference, a master timing device is assigned which transmits a synchronization signal at regular intervals (column 10 lines 63-66). The other devices synchronize their clock to the synchronization signal (column 10 line 66). Accordingly, the devices all have the same time base and each can thereby accurately determine the point in time at which the time phase assigned to the respective device starts. However, the synchronization signal does not constitute the beginning of a communication cycle, rather is independent from the communication cycle. The synchronization signal serves to synchronize the clocks of the nodes in the network to a common time base. Thus, Fellman does not disclose that "a master node initiates a communication cycle in response to a predetermined trigger signal." Accordingly, a

person with ordinary skill in the art could not combine the teachings of Fellman and Woods to arrive at the subject matter of claim 4.

For the reasons articulated, the Applicant concludes that the invention as claimed is sufficiently distinguished from the prior art of record to satisfy the conditions for patenting in the United States, since sufficient motivation for the combination of the Woods and Fellman references does not obtain. The Applicant therefore respectfully requests acknowledgement of the patentability of the independent claims. The dependent claims inherit the limitations of the respective base claim and are therefore similarly distinguished from the prior art of record for the reasons given. Passage to issuance of all claims is therefore respectfully requested.

No new matter has been added in this amendment.

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